## **ARTICLE VII - ADOPTION OF REGULATIONS**

## 701. **Building Regulations Adopted**

The following codes are hereby adopted by reference as a part of the Building Ordinance of the Village of Burr Ridge, Illinois, subject, however, to the modifications and exceptions set forth in Subsections I. through XIII:

Regulations for Detached Single-Family Residential Permits and Multiple Single-Family Dwellings (Townhouses) as Defined by the International Residential Code (IRC):

- International Residential Code for One- and Two-Family Dwellings (IRC), 2003 Edition
- Illinois State Plumbing Code (ISPC), Latest Edition as mandated by the State of Illinois
- International Plumbing Code (IPC), 2003 Edition
- NFPA 70, National Electric Code (NEC), 2002 Edition
- International Property Maintenance Code (IPMC), 2003 Edition

# Regulations for Commercial, Industrial, and all Permits **Other Than** Detached Single-Family Residential and Multiple Single-Family Dwellings (Townhouses):

- International Building Code (IBC), 2003 Edition
- International Mechanical Code (IMC), 2003 Edition
- International Fuel Gas Code (IFGC), 2003 Edition
- International Energy Conservation Code (IECC), 2003 Edition
- Illinois State Plumbing Code (ISPC), Latest Edition as mandated by the State of Illinois
- International Plumbing Code (IPC), 2003 Edition
- International Fire Coe (IFC), 2003 Edition
- International Property Maintenance Code (IPMC), 2003 Edition
- NFPA 70, National Electric Code (NEC), 2002 Edition
- NFPA 101, Life Safety Code (NFPA 101), 2003 Edition
- Illinois Accessibility Code (IAC), Latest Edition as mandated by the State of Illinois

(The Codes above are hereby Amended as set for in the following Subsections.

I. Whenever the provisions of this Ordinance conflict with specific or implied provisions of the codes, rules, or regulations set forth in Section 701, as herein incorporated, the provisions of this Ordinance shall prevail and govern.

## II. International Residential Code for One- and Two-Family Dwellings (IRC), 2003 Edition

The following sections of the International Residential Code (IRC) are deleted, modified, amended or added:

- 1. Section R101.1 Title. Add the Village of Burr Ridge in the space provided for [Name of Jurisdiction].
- 2. Section R104.10.1 Areas Prone to Flooding. Delete the entire paragraph after the section heading and replace with: For regulations pertaining to construction in special flood hazard areas in addition to storm water run-off requirements, refer to Chapters 7 and 8 of the Village of Burr Ridge Municipal Code.
- 3. Section R105.2 Work Exempt from Permit. Delete the entire section up to R105.2.1 and replace with: Refer to Section 221 Permit Waived for Ordinary Repairs of this Ordinance.
- 4. Section R105.3.2 Time Limitation of Application. Delete the entire paragraph after the section heading and replace with: Refer to Section 222.1 of this Ordinance.
- 5. Section R105.5 Expiration. Delete the entire paragraph after the section heading and replace with: Refer to Section 222 of this Ordinance.
- 6. Section R112.1 General. Delete all sections R112.1 through R112.4 and replace with: Section R112.1 General. The Village Board shall function as the Board of Appeals. All appeals shall be submitted in writing no more than 30 days after the issuance of a violation notice on the matter to be appealed.
- 7. Table R301.2.(1). Insert the following data:

## TABLE R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND	WIND	SEISMIC	SUI	ВЈЕСТ ТО Г	AMAGE FRO	OM .	WINTER	ICE SHIELD		AIR	MEAN
SNOW	SPEED	DESIGN		Frost line			DESIGN	UNDER- LAYMENT	FLOOD	FREEZING	ANNUAL
LOAD	(mph)	CATEGORY	Weathering	depth	Termite	Decay	TEMP	REQUIRED	HAZARDS	INDEX	TEMP
					Moderate	Slight to					
	90								*		
25 P.S.F.	mph	В	Severe	42"	to Heavy	Moderate	$0^{\rm o}{ m F}$	Yes		1600	41°F

<sup>\*</sup> Refer to Chapters 7 and 8 of the Village of Burr Ridge Municipal Code.

- 8. Section R313.1(4) Smoke Alarms. Add the following sentence: For the purpose of this section "immediate vicinity" shall mean within 15'-0" of the bedroom door.
- 9. Section R403.2 Wood Foundations. Delete this section and Add: wood foundation systems are not permitted.

- 10. Section R403.1.3.3 Add: Deck Piers. Piers for open decks without a roof or enclosed walls shall be concrete a minimum of 10" in diameter, 42" below grade, and 6" above grade. Masonry deck columns supported on concrete piers shall be designed by a licensed architect.
- 11. Section R403.2 Footings for Wood Foundations. Delete this section in its entirety.
- 12. Sections R403.3, R403.3.1 through R403.3.4 Frost Protected Shallow Foundations. Delete these sections.
- 13. Section R404.1.8 Delete this section in its entirety.
- 14. Sections R404.2 Wood Foundation Walls through R404.4.11 Delete all sections and tables in their entirety and add: wood foundation and ICF foundation systems are not permitted.
- 15. Section R405.2 Wood Foundations. Delete this section in its entirety.
- 16. Section R406.3 Dampproofing for Wood Foundations. Delete this section in its entirety.
- 17. Section R504 Pressure Preservatively-Treated Wood Floors (On Ground). Delete this section in its entirety and add the following: Treated wood floors are not permitted to bear directly on ground.
- 18. Section R505 Steel Floor Faming. Delete all sections and tables in their entirety.
- 19. Section R603 Steel Wall Framing. Delete all sections, figures, and tables and add the following: Steel wall framing is not permitted for load bearing walls. Steel wall framing is permitted for non-load bearing walls and furring.
- 20. Section R611 Insulating Concrete Form Wall Construction. Delete all sections, figures, and tables and add the following: ICF wall construction is not permitted.
- 21. Section R702.3.4 Insulating Concrete Form Walls. Delete this section.
- 22. Section R804 Steel Roof Framing. Delete this section in its entirety.
- 23. Section R1005.2 Exterior Air Intake. Delete the following from the first sentence: "or from spaces within the dwelling ventilated with outside air such as crawl or attic spaces."
- 24. Section R1005.6 Add a new section: All masonry fireplace combustion air ducts shall be class O non-combustible ducts.
- 25. Delete Chapters 25 through 32 in their entirety.
- 26 Adopt Appendix G Swimming Pools, Spas, and Hot Tubs.
- 27. Delete Section AG105.2.(6) and replace with the following: Barriers and fencing shall meet the restrictions set forth in the General Regulations of the Burr Ridge Zoning Ordinance.

28.	For specific construction requirements, fire suppression, and fire alarm requirements for townhouses and multiple-family dwellings, see the amendments in Subsection XIII, International Fire Code, of this Ordinance.

## III. Illinois State Plumbing Code (ISPC), Latest Edition

The following items are changes, additions or deletions to the Illinois State Plumbing Code:

### A. Temporary construction water

1. Backflow protection is required on all water outlets taken from the Village water supply.

## B. Plumbing materials

- 1. Drain, waste, vent
  - a. Schedule 40 PVC below ground (1 & 2 family dwellings only)
  - b. Cast iron
  - c. Galvanized (above ground only)
  - d. Copper type K,L,M no DVV
  - e. Foam core PVC above ground only, non pressure lines (1 & 2 family dwellings only)
  - f. Ductile iron
  - g. Schedule 40 PVC (above ground only)

#### 2. Water

- a. Type K or L only above ground
- b. Type K copper below grade
- c. Brass
- d. Galvanized

#### 3. Storm drainage

- a. PVC Schedule 40 or greater above grade
- b. Cast iron or ductile iron below grade
- c. Clean out at base of stack

## C. Pipe Sizing

- 1. Drain and waste
  - a. Minimum sewer size 4 inch
  - b. Full size clean out within 5 feet of foundation wall
  - c. Minimum size to kitchen sink 2 inch
  - d. Future bathroom in basement requires minimum two inch ejector pump

## 2. Water service sizes allowed

- a. Minimum 1-1/2 inch except on a smaller existing tap where the sizing complies with the Illinois Plumbing Code
- b. Allowable sizes 1-1/2 inch or greater depending on fixture count
- c. Assumes simultaneous use of all fixtures
- d. Full size shut off valves the same size as the water service

#### 3. Storm

- a. Sized per the 1995 International Plumbing Code
- b. Separate overflow system required

#### D. Joints and connections

#### 1. Drain, waste and vent

- a. Purple primer required
- b. Proper adapter between PVC and other materials required
- c. All elastometric couplings require full stainless steel bands
- d. No push rubber compression gaskets above ground for cast iron
- e. All closet collars must be properly secured to sub floor Screws for wood floor Anchors drilled or poured in concrete
- f. No wet vents

#### 2. Water

- a. Lead free or silver solder
- b. Flare, water service compression or silver solder below grade
- c. Compression connection from fixture shut-off to fixture only
- d. No compression on main distribution piping
- e. No compression or corrugated water pipe at water heater
- f. Dielectric union at water heater or dissimilar metals
- g. Inside shut off for sill cocks
- h. Plastic or polybutylene faucets supplies not allowed
- i. Drip/drain valve at water meter
- j. Vacuum relief valve on all elevated or bottom inlet water heaters
- k. Minimum 10 foot separation between sewer and water service line or water service line shelved 18 inches above sewer

#### 3. Storm

- a. Clean out at base of stack
- b. Purple primer on PVC inch opening below roof
- c. Air and water same as residential same as residential

#### E. Other

After August 1, 1990, all new buildings and all building additions where basements, floors, rooms, or occupancy areas will be below ground level at the building site shall have overhead plumbing installed for all connections to sanitary sewer facilities. No occupancy permit shall be issued for any building or building addition commenced subsequent to August 1, 1990, that is not in compliance with the provisions hereof.

## IV. International Plumbing Code (IPC), 2003 Edition

The following sections of the International Plumbing Code (IPC) are deleted, modified, amended or added:

- 1. Section 101.1 Title. Insert Village of Burr Ridge in the space provided for [Name of Jurisdiction].
- 2. Section 106.6.2 Refer to fee schedule in Section 250 of this Ordinance #860.
- 3. Section 106.6.3 Delete this section in its entirety.
- 4. Section 109 Delete this section in its entirety and add: The Village Board shall act as the Board of Appeals. All appeals shall be submitted in writing no more than 30 days after the issuance of a violation notice on the matter to be appealed.
- 5. Delete Chapters 2 through 13 and refer to the latest edition of the Illinois State Plumbing Code and the changes, additions, and deletions outlined in Article VII Section II of this Ordinance #860.

## V. NFPA 70, National Electrical Code (NEC), 2002 Edition

The following sections of the NEC are deleted, modified, amended, or added:

- 1. Article 80 Delete this section in its entirety and add the following: The Village Board shall function as the Board of Appeals. All appeals shall be submitted in writing not more than 30 days after the issuance of a violation notice.
- 2 Delete the following articles in the National Electric Code: (The following wiring methods are not permitted.

Article 320 – Armored Cable: Type AC

Article 326 – Integrated Gas Spacer Cable: IGS

Article 330 – Metal-clad Cable: Type MC

Article 332 – Mineral-insulated, Metal Sheathed Cable: Type MI

Article 334 – Nonmetalic Sheathed Cable: Types NM, NMC, and NMS

Article 338 – Service-Entrance Cable: Type Se and USE

Article 550 – Mobile Homes, Manufactured Homes, and Mobile Home Parks

## VI. International Mechanical Code (IMC), 2003 Edition

The following sections of the International Mechanical Code are deleted, modified, amended, or added.

- 1. Section 101.1 Title. Insert Village of Burr Ridge in the space provided for [name of jurisdiction.]
- 2. Section 106.5.2 Fee Schedule. See Section 250 in this Ordinance.
- 3. Section 106.5.3 Fee Refunds. Delete this section in its entirety.
- 4. Section 108.4 Violation Penalties. Delete this section in its entirety and replace with Article V, Section 501, of this Ordinance #860.
- 5. Section 108.5 Stop Work Orders. Enter \$200.00 in the space provided for [Amount] and delete the last part of the sentence "or more than [amount] dollars."
- 6. Section 109 Means of Appeal. Delete this section and add the following: "The Village Board shall function as the Board of Appeals. All appeals shall be submitted in writing no more than 30 days after the issuance of a violation notice.

#### VII. International Fuel-Gas Code (IFGC), 2003 Edition

The following sections of the International Fuel-Gas Code are deleted, modified, amended, or added.

- 1. Section 101.1 Title. Insert Village of Burr Ridge in space provided for [name of jurisdiction].
- 2. Section 106.5.2 Fee Schedule. See Section 250 of this Ordinance.
- 3. Section 106.5.3 Fee Refunds. Delete this section.
- 4. Section 109 Means of Appeal. Delete this section and add the following: "The Village Board shall function as the Board of Appeals." All appeals shall be submitted in writing no more than 30 days after the issuance of a violation notice.

### VIII. International Property Maintenance Code (IPMC), 2003 Edition

- 1. Section 101.1 Title. Insert Village of Burr Ridge in the space provided for [name of jurisdiction].
- 2. Section 103.6 Fees. Delete this section and see Section 250 of this Ordinance.
- 3. Section 111 Means of Appeal. Delete this section in its entirety and add the following: "The Village Board shall function as the Board of Appeals. All appeals shall be submitted in writing no more than 30 days after the issuance of a violation notice.
- 4. Section 303.14 Insect Screens. Insert May 1<sup>st</sup> and October 15<sup>th</sup> in the [Date] spaces provided.
- 5. Section 602.3 Heat Supply. Insert October 15<sup>th</sup> and May 1<sup>st</sup> in the [Date] spaces provided.
- 6. Section 602.4 Occupiable Work Spaces. Insert October 15<sup>th</sup> and May 1<sup>st</sup> in the [Date] spaces provided.

#### IX. Illinois Accessibility Code (IAC), Latest Edition

No changes, deletions, or modifications to the Illinois Accessibility Code.

## X. International Energy Conservation Code (IECC), 2003 Edition

- 1. Section 101.1 Title. Insert Village of Burr Ridge in the space provided for [Name of Jurisdiction].
- 2. Section 302 Thermal Design Parameters. Enter Table 302.1.

CONDITION	VALUE
Winter <sup>a</sup> , Design Dry-bulb(°F)	$0^{\circ}$ F
Summer <sup>a</sup> , Design Dry-bulb (°F)	91°
Summer <sup>a</sup> , Design Wet-bulb (of)	75°
Degree days heating <sup>b</sup>	6155
Degree days cooling <sup>b</sup>	830
Climate Zone <sup>c</sup>	14B

## XI. International Building Code, 2003 Edition

The following sections of the IBC are deleted, modified, amended or added:

- A. 101.1 Insert the Village of Burr Ridge
- B. 102.4 Change as follows: Referenced Codes and Standards: The standards referenced in this code and listed in Chapter 35 shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of this code and reference standards, the most stringent shall apply.
- C. 108.2 See Fee Schedule Section 250 in this Ordinance.
- D. 112 Board of Appeals. Delete entire section. The Village Board shall function as the Board of Appeals. All Appeals shall be submitted in writing no more than 30 days after the issuance of a violation notice on the matter to be appealed.
- E. 113.4 Penalities. See Section 701 in this Ordinance.
- F. 114 Stop Work Orders
- G. 310.3 Add the following: For walls and openings in R-3 and R-4 Use groups within six (6) feet of adjacent buildings or property lines, a two (2) hour fire resistance rating shall be provided. All two (2) hour fire resistive rated walls shall either protrude through the outer roofline or shall have horizontal roofline protection, as shall be pre-approved by the code official.
- H. Table 708.1 Change as follows: Line 4 tenant spaces change to 1 hour with no exceptions. See Fire Prevention Code F317.1 and .2.

#### **Fire Sprinklers**

- I. Section [F]903.2(a) Add the following: All new construction over one (1) story in height and all other one (1) story buildings over two thousand (2,000) square feet in area. Exception: Detached Single-family residences.
- J. Section [F]903.2(B) Add the following: All stories below grade Exception: Detached Single-family residences.

## **Automatic Fire Alarm Systems**

- K. Section 905 Standpipe Systems: Delete text and Add: Fire standpipes where required: Standpipes shall be installed on new construction when:
  - 1. Any part of the building is over thirty (30) feet above the lowest level for access.
  - 2. Any floor of the building is three (3) or more stories in height.
  - 3. When any part of the building is over one hundred fifty (150) feet from where the closest fire department vehicle can operate.
  - 4. Design Requirements: All standpipes shall be Class I or III system designed and installed in accordance with NFPA #14, Standpipe and Hose Systems, 1996 Edition.
  - 5. All two and one-half (2-1/2) inch outlets shall include a two and one-half (2-1/2) by one and one-half (1-1/2) inch reducer with a one and one-half (1-1/2) inch cap.
  - 6. 1 Maintenance and Testing: The maintenance program for fire protection systems and components shall conform to the requirements in this Ordinance.
  - 7. Vacant Buildings: Vacant or unoccupied buildings or portions thereof shall maintain all required sprinkler, standpipe, and/or protective signaling systems and all component parts in a workable condition at all times.
  - 8. The system(s) shall be tested in the presence of the appropriate Fire District's code official if the adequacy of the system(s) is required.
- L. Section 905.3A Add the following: Any floor of the building is three (3) or more stories in height.
- M. Section 907.2.9 Delete text and add: All R-2 occupancies
- N. Section 907.2.23 Add the following: All buildings having multiple uses including residential except detached (single-family homes).
- O. Section 907.2.24 Add the following: All Townhomes.
- P. Section [F]907.2.25 Add the following: All other buildings over one (1) story in height and one (1) story buildings over one thousand (1,000) square feet.

- Q. Section 1014.1 Add the following sentence: All areas, rooms, and spaces over 2,000 square feet shall have a minimum of two separate remote exits except for multiple-family residential dwelling units located on a single story with up to 2,500 square feet and with an occupancy load not to exceed 12.5 persons may have only one means of exit provided said unit provides an exterior area of rescue and that the building, unit and the exterior area of rescue are protected throughout with an approved automatic sprinkler system in accordance with 903.3.1.1.
- R. Table 1016.1 Delete the fire resistance rating reduction for corridors "with sprinkler systems" and add: All corridors shall have a one-hour fire resistance rating (minimum).
- S. 1018.2 Add item number 4 as follows: All buildings over 2,000 square feet shall have a minimum of two separate remote exits.
- T. 1023.6 Hard Surface Requirements and Remove all Exceptions: Delete the exceptions and Add: From any exit discharge to the public way, the walking surface shall be a paved or other permanent hard surface that shall be maintained year round as approved by the code official.
- U. 1805.4.6 Wood foundations Delete entire section. Wood foundations are not permitted.
- V. 3410.2 Original Village of Burr Ridge Building Ordinance adopted January 23, 1957.
- W. See the Chapter 35 for an expanded list of approved referenced standards.
- X. Delete Chapter 11, Accessibility and replace with "See Article VII, Section 701 VIII of this Ordinance.
- Y. Delete Chapter 27, Electrical, and replace with "See Article VII, Section 701 IV of this Ordinance.
- Z. Delete Chapter 29, Plumbing Systems, and replace with "See Article VII, Section 701 III of this Ordinance.
- AA. Section 1013.3; Add the following: The length of a common path egress travel in occupancies in Group R-2 shall not be more than 125 feet provided that the building is protected throughout with an approved automatic sprinkler system in accordance with 903.1.1.

## XII. NFPA 101 Life Safety Code, 1997 Edition

There are no changes, deletions or modification to NFPA 101 Life Safety Code.

#### XIII. International Fire Code (IFC), 2003 Edition

The following sections of International Fire Code are deleted, modified, amended, or added:

A. F-101.1 Insert: Village of Burr Ridge

- B. F-101.1 Insert: It is hereby noted that the Village of Burr Ridge defers plan review authority regarding matters of fire prevention and fire protection to the Pleasantview Fire Protection District and the Tri-State Fire Protection District in adherence with the particular fire districts' geographical boundaries with ultimate final authority for decisions given to the Village of Burr Ridge Board of Trustees.
- C. F-102.6 Change as follows: Reference Standards: The standards referenced in this code and listed in Chapter 44 shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of this code and referenced standards, the most stringent shall apply.
- D. F-103.1.1 It shall be the duty and responsibility of the Chief Administrator of the appropriate Fire District, or his designee, to enforce the provisions of this Code. The designated enforcement officer of this code is herein referred to as the Code Official.
- E. F-104.11.3 Add: Barricading Vacant or Fire Damaged Property: Every person owning or having charge or control of any vacant or fire damaged building shall remove all combustible waste and refuse therefrom and lock, barricade, or otherwise secure all windows, doors, and other openings in the building to prohibit entry by unauthorized persons.
- F. F-105.4.1 Add: Analysis Review and Approval of New Construction Plans: The appropriate Fire Protection District's Bureau of Fire Prevention shall analyze, review, and approve all plans for new construction (as defined by this code and those codes of the appropriate Fire Protection District) in that District; that approval will certify that, if the construction is completed in conformity with the plans and specifications submitted to the Bureau of Fire Prevention then that construction will be in compliance with the then applicable District Codes and Ordinances.
- G. F-105.4.7 Add: Analysis Review and Approval of Minor Alterations and Repairs: The Bureau of Fire Prevention shall analyze, review, and approve all plans for any minor alterations or repairs to property in the appropriate Fire Protection District.
- H. F-105.4.8 Add: Application Requirements: All persons, firms, and corporations seeking to build new construction within the Village of Burr Ridge shall make application for the approval of all plans and specifications therefore by submittal of the same, along with an application form and any other information as may be required by the Village of Burr Ridge Building Department and the appropriate Bureau of Fire Prevention. New construction is prohibited in the Village of Burr Ridge without the prior approval of the appropriate Bureau of Fire Prevention, and all new construction shall be constructed and completed in strict compliance with the plans and specifications and any other documents submitted to and approved by the Village of Burr Ridge Building Department and the appropriate Bureau of Fire Prevention.

#### I. F-201.5 Add: Abbreviations

- 1. The abbreviations NFPA and NFiPA mean National Fire Protection Association.
- 2. The abbreviation IFC shall mean the International Fire Code, 2003 Edition.
- 3. The abbreviation LSC shall mean the NFPA #101, Life Safety Code, 2003 Edition.

#### J. F-202.1 Add: Definitions

- 1. Boarding Houses, Multi-Family Dwellings: Use Group R-2 shall include all boarding houses and similar buildings arranged for the shelter and sleeping accommodations in which the occupants are primarily not transient in nature.
- 2. Change of Use: For the purpose of determining a "change in use", this shall mean the change from one general property use to another, or change from one specific property use to another within the same general property use. Listings of both general and specific property uses are found in NFPA #901, Uniform Fire Coding for Fire Protection.
- 3. Buildings or parts of a building vacant for more than one (1) year shall be considered a change of use.
- 4. Code Official: Wherever the term "Code Official" appears in this Fire Prevention Ordinance, it shall mean the appropriate Chief Administrator or designee.
- 5. Condominium: A condominium is a form of ownership of real estate.
- 6. Fireworks: The term fireworks shall mean and include any explosive composition, or any substance or combination of substances or article prepared for the purpose of producing a visible or audible effect of a temporary exhibitional nature by explosion, combustion, deflagration, or detonation, and shall include blank cartridges and toy cannons, in which explosives are used, the type of balloons which require fire underneath to propel the same, firecrackers, torpedoes, skyrockets, Roman candles, bombs, sparklers, smoke bombs, snakes, or facsimile, or other fireworks of like construction and any fireworks containing any explosive compound, or any tablets or other device containing any explosive substance, or containing combustible substances producing visual effects: provided, however, that the term "fireworks" shall not include toy pistols, toy canes, toy guns or other devices in which paper or plastic caps containing twenty-five hundredths (25/100) grains or less of explosive compound are used, provided they are so constructed that the hand cannot come in contact with the cap when in place for the explosion; and the toy pistol paper or plastic caps which contain less than twenty hundredths (20/100) grains of explosive mixture; the sale and use of which shall be permitted at all times.
- 7. New Construction: New construction, when used in this code, are (1) those new buildings, (2) those buildings having height and/or area added to an existing building, (3) those buildings having interior alterations, (4) those buildings changing Use Groups.
- 8. Townhouse/Rowhouse: A townhouse or rowhouse is considered as a Use Group R-3. For walls and openings within six (6) feet of adjacent buildings or property lines, a two (2) hour fire resistance rating shall be provided. All two (2) hour fire resistive rated walls shall either protrude through the outer roofline or shall have horizontal roofline protection, as shall be pre-approved by the code official.
- 9. Uniform Fire Coding for Fire Protection.

- K. F-308.6.6 Add: Cooking and Heating Appliances; Hotels, Motels, Boarding Houses, Rooming Houses, and Dormitories: The use of any cooking or heating appliances, other than what has been provided by any hotel, motel, boarding house, rooming house, or dormitory shall be prohibited.
- L. F-310.9 Add: Electrical Installations: All electrical components, wiring, and equipment shall be designed, manufactured, installed, and maintained in accordance with NFPA #70, listed in Chapter 45.
- M. F-311.2.2 Delete text and Exceptions, Add: Fire Protection Vacant Buildings: Vacant or unoccupied buildings or portions thereof shall maintain all required sprinkler, standpipe and/or protective signaling systems, and all component parts in a workable condition at all times.
  - 1. F-504.3.1 The system(s) shall be tested in the presence of the appropriate Fire District's code official if the adequacy of the system(s) is questioned.
- N. 315.3.3 Add: Periodic Removal: Combustible materials shall be removed daily, or more often as is necessary, to suitable vaults, bins, dumpsters, compactors or separate buildings Such practices shall be as approved by the code official.
- O. F-503.1.1 Delete the Exceptions and add the following: Public Access and Fire Lanes on Private Property, Devoted to Public Use, shall be provided so that:
  - 1. Public or private access is provided to each building (including any building under construction) so that the first responding fire apparatus will be able to be so located that all points of the interior of the building may be reached by one hundred fifty (150) feet of initial attack hose.
  - 2. Where the size or height of the building does not allow Section 503.1.1(1) to be met, an interior standpipe equipped with hose connection approved by the code official may be permitted as an exception. The standpipe system shall be connected to a public water supply system. Refer to Section 905.1 (Design Requirements for Standpipe Systems).
  - 3. Public or private access for fire apparatus shall be provided around the building.
  - 4. Access shall be designed so that there may be proper operation of ladders and mechanically elevated mechanisms.
  - 5. Minimum width of the fire lanes shall be twenty (20) feet with greater widths to accommodate vehicles when turning and laddering buildings. The turning radius shall be per the current handout from the appropriate Fire District.
  - 6. Access routes shall be so arranged that apparatus may respond to all points of the building.
  - 7. Parking of vehicles otherwise obstructing such fire lanes or access routes shall be prohibited at all times.

- 8. The access requirements may be modified by the building code official where adequate building access openings and a complete fire suppression system is provided.
- 9. Permanent all weather signs identifying fire lanes and accessways shall be posted, as determined by the code official.
- 10. A minimum of six (6) inches of granular stone surfaced by at least two (2) inches of bituminous asphalt or similar permanent material shall be deemed to meet this requirement.
- 11. Access roads shall be not less than fifteen (15) feet from the building. The distance is measured from the building to the closest edge of the road.
- 12. Greater setback distances are required for tall buildings to allow for proper laddering of the building.
- 13. For buildings under construction, this criterion may be modified by the code official based on the type, extent and status of construction.
- P. F-505 Premises Identification: Delete Section 505.1 and replace with the following:
  - 1. Responsibility: All owners of every building within the corporate limits of the Village of Burr Ridge shall place and maintain on the building or building accessory (defined as a mailbox, sign, post, or other such item) Arabic numbers showing the proper street number assigned to the building by the municipality or county in which the building is located.
  - 2. Design: The Arabic numbers are to be a minimum of three (3) inches in height.
  - 3. Exception: On buildings that are set back from the street in excess of forty (40) feet (from the curbline), the Arabic numbers are to be a minimum of four (4) inches in height.
  - 4. Building Accessory: On buildings that are not visible from the street, the building accessory with the required Arabic numbers shall be located within ten (10) feet of the driveway or sidewalk leading to the building.
  - 5. Contrasting Colors: The Arabic numbers shall have a color that is different from and contrasts with the building or building accessory to which the numbers are attached and shall be visible from any direction of travel from the street.
  - 6. Multi-Tenant Buildings: Multi-tenant buildings with multiple access locations shall have building identification on the front and rear of the building for each tenant.
- Q. F-506 Add: Rapid Entry System (Key Boxes) Delete Section 506 and add the following:
  - 1. General: All buildings that are equipped with an approved fire alarm system that consists of automatic detection and/or all buildings equipped with an approved automatic sprinkler system and are interconnected to an alarm monitoring agency shall have an approved key box system.

- 2. Location: The code official shall approve the location of the key box.
- 3. Contents: The key box shall contain keys to gain necessary access to the building at:
  - a. Locked points of ingress/egress whether on the exterior or interior of the building.
  - b. Locked electrical, mechanical, or storage rooms.
  - c. Elevator controls.
  - d. Alarm panels and devices.
  - e. Other areas designated by the code official.
- 4. Key Identification: Each key shall be identified in an approved manner for quick use in case of an emergency.
- 5. Master Key: Where possible, a single master key shall be provided.
- 6. Alarm: At the request of the owner or lessee, the code official shall permit the installation of a key box tamper switch connected to the building's security alarm system.
- R. Section 508 Fire Protection Water Supplies: Delete the entire section and replace with the following:
  - 1. Application: This section defines water supplies for use for new construction.
  - 2. Water Source: All buildings or structures shall be served by a public water supply system meeting this criterion. This system shall be under pressure with an average static pressure of not less than thirty-five (35) pounds per square inch (psi). Flows shall be calculated at twenty (20) (psi) residual pressure. The supplies shall be available for a continuous four (4) hour duration except for flows less than two thousand (2,000) gallons per minute (gpm) need be available for a two (2) hour duration.
  - 3. All changes to the Village water system to comply with the water source requirements shall be at the expense of the owner or developer.
  - 4. Fire Flow Required: The following water supplies in gallons per minute (gpm) are required based on the hazards therein:
    - a. Single-Family Detached Residential one thousand (1,000) (gpm) to one thousand five hundred (1,500) (gpm).
    - b. Town/Row or Cluster Housing one thousand five hundred (1,500) (gpm) to two thousand (2,000) (gpm).

- c. Apartment Type Construction three thousand (3,000) (gpm) to four thousand (4,000) (gpm).
- d. Industrial and Storage three thousand (3,000) (gpm) to five thousand (5,000) (gpm).
- e. Research and Development Laboratories three thousand (3,000) (gpm) to four thousand (4,000) (gpm).
- f. Business and Commercial Areas three thousand (3,000) (gpm) to four thousand five hundred (4,500) (gpm).
- g. Mercantile Centers three thousand (3,000) (gpm) to six thousand (6,000) (gpm).
- h. Assembly and Educational three thousand (3,000) (gpm) to five thousand (5,000) (gpm).
- i. Health Care and Institutional three thousand (3,000) (gpm) to four thousand (4,000) (gpm).
- j. High Hazard three thousand (3,000) (gpm) to eight thousand (8,000) (gpm).

### **Fire Hydrants**

5. Plans Submitted: Plans shall be provided prior to any construction showing the location of fire hydrants and sprinklers and/or standpipe connection on either public or private property and shall be approved by the code official before any building construction starts.

All changes to the Village water system to comply with the hydrant requirements shall be at the expense of the owner or developer. An approved hydrant layout shall be submitted before a permit is issued.

- 6. Distance to Hydrants: Fire hydrants shall be located along public streets so that no portion of the building or structure to be protected will be over two hundred fifty (250) feet from any hydrant. Where this may not be physically possible, additional hydrants shall be located upon the premises accessible to motorized fire apparatus.
- 7. Hydrants in Operation: Water supplies, including fire hydrants in accordance with this code, shall be in operation prior to the start of construction of any building.
- 8. Hydrants Along Streets: Hydrants shall be located at street intersections with intermediate hydrants provided so that the space between hydrants shall not exceed three hundred (300) feet. This distance shall be measured along an approved fire lane, access route, street or similar apparatus route.
- 9. Multiple Hydrants Required: At least two (2) hydrants shall be located within two hundred and fifty (250) feet of each building.

- 10. Special Locations: Additional fire hydrants may be required and located closer than the spacing required for high hazard classifications, as defined in NFPA 101 (Life Safety Code) (2003), for dead end roads or at the termination of cul-de-sacs.
- 11. Supplemental Hydrants: Additional fire hydrants shall be provided within five hundred (500) feet of each building so that the required fire flow divided by one thousand (1,000) will equal the number of hydrants available.
- 12. Connections: Hydrants shall be located in close proximity (50'-75') to any fire department connection (sprinkler or standpipe) as determined by the code official.
- 13. Parking Restricted: Parking is not permitted within ten (10) feet of a fire hydrant.

### Fire Hydrant Installation: Fire hydrants shall be installed so that:

- 14. Access: Access to fire hydrants shall be by an approved roadway adequate in width (minimum twenty (20) feet), clearance and strength for firefighting purposes. Such routes shall be maintained accessible during all seasons of the year. Easements for access or other access approval may be required for private roads.
- 15. Distance to Roadway: Hydrants will be located approximately five (5) feet from all weather roadways.
- 16. Distance to Buildings: Hydrants shall be located no closer than twenty-five (25) feet from the building to be protected. Hydrants shall be located no closer than fifty (50) feet from transformers, other hazardous electrical equipment or other hazards to the use of the fire hydrants.
- 17. Pumper Outlet Direction: Each hydrant shall have the pumper (steamer) connection facing the primary street and shall be accessible so that a connection can be made between the hydrant and the apparatus located in the street with twenty (20) feet of suction hose.
- 18. Hydrant Outlet Location: Fire hydrant outlets shall be a minimum of eighteen (18) inches and no more than thirty-six (36) inches above the finished grade.
- 19. Hydrant Protection: When subject to physical damage from vehicles, fire hydrants shall be protected from damage by approved methods, including barriers.
- 20. Fire hydrants used in conjunction with water supplies shall be of a type acceptable to the Village of Burr Ridge Water Department and the appropriate Fire Protection District. Hydrants shall meet the standards of the American Water Works Association C-502. Hydrants shall include a six (6) inch barrel, two (2) two and one-half (2-1/2) inch and one (1) four and one-half (4-1/2) inch outlets. Outlet threads shall be American National Standard. An auxiliary gate valve shall be provided on the hydrant branch line (minimum six (6) inch diameter).
- 21. Existing fire hydrants that are replaced shall meet the above criteria.

#### S. F-511 Add: Miscellaneous Provisions

- 1. Tenant Separation: Each tenant space shall be separated from other tenant spaces and corridors by walls, partitions and floor-ceiling assemblies having at least a one (1) hour rating approved fire resistance rating. The floor-ceiling assembly is not required to have a one (1) hour rating when not required by the IBC and the building has a complete automatic sprinkler system.
- 2. Hazardous Areas: Rooms used for storage, elevator equipment, electrical equipment, boiler or furnace rooms, fuel storage, janitor's closets, laundry rooms, maintenance shops, kitchens and similar hazardous areas shall be separated from other building areas by wall/floor/ceiling/window/opening assemblies having a fire resistance rating of not less than one (1) hour with appropriate protection of openings into the rooms. Opening protection shall be per the IBC.

The floor ceiling assembly is not required to have a one rating when not required by the IBC.

- 3. Fire Resistance Rating, Maintenance, and Repair: The fire resistance of walls, floors, ceilings, and partitions, including openings therein and other static fire protection requirements shall be maintained in proper condition and repair at all times.
- 4. Smoke Resistance: Walls, floors, ceilings, and partitions, including openings therein that can assist in the prevention of smoke and gas movement, shall be maintained in proper condition at all times.
- 5. Ambulance Cot: Where elevators are provided, at least one (1) elevator cab shall be of such size to accommodate a cot that is 24 inches by 76 inches in the horizontal open position and the accompanying personnel.
- T. F-901.6.3 Add: 1 Maintenance and Testing: The maintenance program for fire protection systems and components shall conform to the requirements in this Ordinance.
- U. F-901.5.2 Add: Building Occupancy: When any building or structure is required to be equipped with an approved fire protection system, the system shall be in full operation before the building may be occupied.
- V. F-901.5.3 Add: Complete Information: The code official shall determine the detail of information required, including a description of the maintenance performed, time, date, and extent of test performed.
- W. F-901.6.2 Records: Delete text and add: Reports shall be submitted to the appropriate Fire District Bureau of Fire Prevention on an annual basis.
- X. F-903.2 Automatic Sprinkler Systems: Minimum Requirements:
  - 1. Design: Automatic fire suppression systems shall be designed in accordance with appropriate standards of the National Fire Protection Association. The code official shall approve design criteria.

- 2. Automatic Sprinkler Protection: The fire suppression system shall be an automatic sprinkler system unless the code official approves another type of system.
- 3. Periodic Testing and Inspection: All automatic sprinkler systems shall be maintained, periodically inspected, and tested in accordance with NFPA 13, NFPA 25, Chapter 45 and any other applicable NFPA Standards.
- 4. Whenever a backflow prevention device is required to be installed on any existing sprinkler system, the system shall be recalculated to assure that the design density is satisfied. Should the design density be inadequate, the automatic sprinkler system shall be redesigned as needed to be in compliance with the required design density.
- 5. Valve Control Area Diagram: A diagram showing areas served by control valves shall be placed adjacent to such valves and in the riser room.
- 6. Where Required: The following are locations where an automatic fire suppression system is required:
- 7. Where required in the 2003 IBC.
- 8. All new construction over one (1) story in height and all other one (1) story buildings over two thousand (2,000) square feet in area.
- 9. Exception: Single-family residences.
- 10. All stories below grade.
- 11. Exception: Single-family residences.
- 12. All buildings or structures for the manufacture of combustible goods or merchandise, and all business occupancies, exceeding seven thousand (7,000) square feet.
- 13. Existing motor vehicle repair or storage buildings exceeding seven thousand (7,000) square feet.
- 14. Existing storage buildings over seven thousand (7,000) square feet.
- 15. Existing hotels, motels, boarding houses, rooming houses, and dormitories.
- 16. All sprinkler control valves shall be electronically supervised by the building's fire alarm system and shall be directly connected to the appropriate Fire Protection District's Communications Center in an approved manner.
- 17. All sprinkler control valves shall be chained and locked in the open position.
- Y. F-905 Standpipe Systems: Delete text and Add: Fire Standpipes where Required: Standpipes shall be installed on new construction when:
  - 1. Any part of the building is over thirty (30) feet above the lowest level for access.
  - 2. Any floor of the building is three (3) or more stories in height.

- 3. When any part of the building is over one hundred fifty (150) feet from where the closest fire department vehicle can operate.
- Z. F-905.1 Design Requirements: All standpipes shall be Class I or III system designed and installed in accordance with NFPA #14, Standpipe and Hose Systems, 2000 Edition.
- AA. F905.2 All two and one-half (2-1/2) inch outlets shall include a two and one-half (2-1/2) by one and one-half (1-1/2) inch reducer with a one and one-half (1-1/2) inch cap.
- BB. F-907 Fire Alarms and Detection Systems: Delete the entire Section 907 and replace with the following:

- 1. Protective Signaling (Fire Alarm) Systems and Automatic Detection Systems.
- 2. Design: Automatic protective signaling (fire alarm) systems and automatic detection systems shall be designed in accordance with the appropriate standards of the National Fire Protection Association. The Code Official shall approve the design criteria.
- 3. Where Required: The following are locations where a protective signaling system with automatic detection is required.
- 4. Residential Uses: In all buildings of Use Groups R-1 and R-2.
- 5. All buildings having multiple uses, including residential use (except R-4).
- 6. Exception: Existing buildings of R-2 Use Group with six (6) units or less, such as lodging house, dormitories, apartments, and similar occupancies.
- 7. Townhomes Use Group R-3: All new construction townhomes or similarly used buildings.
- 8. Other Uses: All other buildings over one (1) story in height, and one (1) story buildings over one thousand (1,000) square feet in area.
- 9. Exception: Existing one (1) story buildings under five thousand (5,000) square feet in area.
- 10. Panel Identification: An outside strobe light shall be located at the entrance providing access to each alarm and/or annunciator panel.
- 11. Annunciator Panel: An annunciator panel is required where the fire alarm control panel is not visible from the building exterior. The annunciator panel shall be visible from the exterior of the building.
- 12. Zone Identification: Each zone of each panel shall be clearly and permanently identified in a manner approved by the code official.
- 13. Periodic Testing and Inspection: All automatic protective signaling (fire alarm) systems and automatic detection systems shall be maintained, periodically inspected and tested in accordance with NFPA 72, Chapter 45, and any other applicable NFPA standards.
- 14. All protective signaling system connections shall be installed in a method approved by the appropriate Fire Protection District.
- 15. Exception: Single-family residences.
- 16. Signals to be Monitored: All alarm, supervisory, panel trouble, line trouble or loss of communication signals shall be monitored at the appropriate Fire Protection District's Communications Center.

- 17. Systems Out of Service: Protective-signaling systems shall be maintained in service at all times. Systems shall not be out of service for more than eight (8) hours for maintenance or repair.
- 18. Zones: Each floor and each type of system shall be separately zoned.
- 19. Alerting Devices: All alerting devices shall be an approved audio/visual type.
- 20. Outside Alerting Device: All fire alarm and fire suppression systems shall have an outside alerting device of a type and at a location approved by the code official.
- 21. Duct Detectors: All duct smoke detectors installed or repaired after the effective date of this Ordinance shall signal in a supervisory condition only.
- CC. 909.1 Smoke Control Systems: Scope and Purpose: Add the following:
  - 1. Where Required: An emergency smoke control system shall be provided in "new construction" as follows:
  - 2. Sprinklered Buildings: In all sprinklered buildings with a gross area (combined area of all floors) exceeding forty thousand (40,000) square feet, including all "unlimited area" buildings as defined by the applicable building code.
  - 3. Multiple Story or Height of Buildings: In all buildings over three (3) stories or thirty-five (35) feet in height.
  - 4. Atriums: In buildings with multi-story atriums or open wells.
  - 5. Covered Malls: In all covered malls, including individual tenant spaces and anchor stores.
- DD. 909.2 General Design Requirements: Add the following:
  - 1. Where roof gravity venting is used, the maximum spacing between vents shall not exceed one hundred twenty (120) feet. The vent area to floor area ratio shall not exceed 1:100 for ordinary hazards and 1:150 for light hazards.
  - 2. High Hazard: Roof venting requirements shall be determined by the specific hazards involved.
  - 3. Mechanical Systems: Mechanical smoke removal may be used in lieu of gravity venting. A minimum of six (6) air changes per hour of the entire space shall be provided.
  - 4. Supply/Return Air: The mechanical smoke management system shall have an adequate supply and/or return air source to allow the system to operate properly.
  - 5. Controls: The design of the controls for the systems, including their location shall be approved by the code official.

- EE. F-913.5.5 Add: Pump Flow Tests: Each fire pump shall be tested annually by discharging to the atmosphere the required flow one hundred percent (100%) rated capacity at one hundred percent (100%) of the rated pressure and at one hundred fifty percent (150%) rated capacity at sixty-five percent (65%) of the rated pressure. The test results shall be recorded and a copy of all pump test information shall be submitted to the code official.
- FF. 1006.1 Illumination Required: Delete the Exceptions and Add: Emergency Lighting: Emergency power supplies from an independent, approved reliable source (battery or automatic starting generator) shall be provided in all rooms and spaces where two (2) or more exits are required, stairways, corridors, access routes and other exit components.
- GG. 1014.1 Add Item #3. Number and Locations of Exits: All rooms, spaces, or buildings over 2,000 square feet in area shall have two separate remote means of egress.
- HH. Chapter 33 Delete Chapter Add: Chapter 33 Fireworks
  - 1. Scope: Sale, handling, and display of fireworks: Except as hereinafter provided, it shall be unlawful for any person, firm, co-partnership, or corporation to offer for sale, display, or expose for sale, sell at retail, provide storage for, use or possess, or manufacture fireworks, or explode any fireworks within the Village of Burr Ridge or allow any such acts on property owned by such person, firm, co-partnership, or corporation within the Village, provided, however, the code official may issue a permit for supervised public displays of fireworks, provided the applicant for such permit shall comply with the regulations hereinafter established for the issuance of such permit. The fire code official shall issue the fireworks permit.
  - 2. Explosives: The storage of explosives and blasting agents is prohibited.
  - 3. Seizure: The code official shall seize, take, remove or cause to be removed, at the expense of the owner, all stocks of fireworks or explosives offered or exposed for display or sale, stored or held in violation of this article.
  - 4. Exceptions: Nothing contained in this ordinance shall be construed to prohibit the use of fireworks by railroads, public utilities, public and private carriers, or other transportation agencies, for signal purposes or illumination, or the sale or use of blank cartridges, for a show or theater, or for signal or ceremonial purposes in athletics or sports, or for use by veteran or military organizations.
  - 5. Requirements for Approved Displays: The supervised public display of fireworks may be permitted in accordance with the following requirements.
    - a. The person in charge of a public fireworks display shall have a copy of the permit required by this Article in his possession.
    - b. Due to the hazardous nature of materials involved, no fireworks shall be stored on location prior to set up and show time.

- c. Personnel setting up and shooting the fireworks display shall be experienced and professional shooters; a Pyrotechnic/Blasters license or equivalent credentials are acceptable.
- d. Sufficient security shall be provided to keep all persons, except personnel setting up and shooting the fireworks, at least five hundred (500) feet from display area during set up and firing.
- e. The supplier of the fireworks shall have a current State of Illinois permit identified by number.
- f. There shall be no trees or utility poles or any type of obstruction within fifty (50) feet of the firing range and the firing range shall be no less than two hundred (200) feet from railroads, highways, general public, or any other structures, nor six hundred (600) feet of any hospital, asylum or infirmary.
- g. The grass around any mortar shall be wet down continuously for a minimum of eight (8) hours before firing, or to the satisfaction of the code official. One (1) mortar loader shall be provided for each six (6) mortars.
- h. The appropriate Fire District may be at the site of the firing with a minimum of one (1) engine company.
- i. Mortar holes are to be drilled in a minimum of three-quarters (3/4) of the length of the mortar and dirt is to be packed around the mortar.
- j. Mortars shall be two (2) feet apart with the minimum distance of six (6) feet between mortars of different sizes.
- k. The loader and shooter shall wear tight fitting non-combustible clothing and shall not have consumed or used alcoholic beverages, drugs or controlled substances for twelve (12) hours before firing, nor be under the influence thereof.
- 1. No firing shall take place if the wind is twenty (20) miles per hour or above, or if fireworks are wet.
- m. All aerial displays shall be kept in wooden boxes with self-closing covers, the maximum size of which shall be thirty-six (36) inches by twenty-four (24) inches by twenty-four (24) inches; the boxes shall be placed two (2) inches off the ground and boxes shall be a minimum of ten (10) feet from the mortars.
- n. All shows shall be suspended for severe weather until deemed safe by the Code Official or the Chief Administrator or his designee.
- 6. Recovery Responsibility: The supplier of the fireworks shall be solely responsible for the recovery of all fireworks and aerial displays that have not been fired.
- 7. Search for Unfired Displays: Recovery or the search for unfired displays shall start immediately, or not later than sunrise.

- 8. Guards: The area of a misfired shell shall be guarded by the display company at its cost from the time of the firing until discovery and removal of the shell.
- 9. Recovery Cost: The cost of recovering the shells shall be solely the responsibility of the fireworks supplier and/or dealer.
- II. F-3403.1.1Add: Inside Storage of Fuel: Flammable and combustible fuel stored inside a building shall be stored in approved metal containers with self-closing lids and the total amount shall not exceed ten (10) gallons.
- JJ. F-3403.5.1 Labeling Containers and Tanks Over Thirty (30) Gallons Capacity: Any flammable or combustible liquid cans, containers, tanks, or similar vessel having a capacity over thirty (30) gallons shall be labeled using N.F.P.A. 704, Standard System for the Identification of the Fire Hazards of Materials.
  - 1. Outside Flammable Liquid Storage: Outside flammable liquid storage tanks are not permitted above ground.
  - 2. Fuel Dispensing Inside the Building: No fuel dispensing is allowed inside of a building.
  - 3. Basements, Pits and Sub-floor Work Areas: Basements, pits and sub-floor work areas are not permitted in new construction for service stations and repair garages.

#### KK. F-3404.2

- 5. Add: Automotive Service Stations: Above-ground tanks shall not be utilized for the storage of motor fuels at automotive service stations which the public has access to. Above-ground tanks utilized for the storage of motor fuels at automotive service stations to which the public does not have access to shall be installed in accordance with this section and the requirements for fire-resistant tanks or tanks in vaults specified in NFPA 30A listed in Chapter 45.
- 6. Add: Barrier Protection: Physical barriers complying with Section F-3205.4 shall be provided to protect the area where tanks, except those installed in special enclosures, are located. Barriers shall be spaced at a distance apart from each other and located at a distance away from the tanks so that vehicles which are normally operating in the area of the tanks are prevented from coming into contact with the tanks. Additional and/or upgraded physical barrier protection shall be required where deemed necessary by the Code Official.
- 7. Access: Each tank and each special enclosure shall be surrounded by a clear open space not less than 3 feet (914mm) in width for maintenance and inspection.
- 8. Add: Capacity Limits: Above-ground tanks containing combustible liquids shall be limited to the following capacities. Tanks shall also be installed in accordance with the requirements of this section.
- 9. Add: Class II Liquids Tanks containing CLASS II liquids shall not exceed 1,000 gallons individual capacity or 1,000 gallons aggregate capacity. Tanks containing over

- 250 gallons of a CLASS II liquid shall be installed in accordance with the requirements for fire-resistant tanks and tanks in vaults specified in NFPA 30A listed in Chapter 44. Such tanks shall also be approved and meet equivalent standards of those tanks which are listed as AProtected@ as defined by UL 2085. Tanks containing 250 gallons or less of a CLASS II liquid shall be installed in accordance with the requirements for fire-resistant tanks specified in NFPA 30A listed in Chapter 45. Such tanks shall also be approved, and meet equivalent standards of those tanks which are listed as AFire Resistant@ as defined by UL 2080.
- 10. Add: Class III A Liquids Tanks containing CLASS III A liquids shall not exceed 1,500 gallons individual capacity or 1,500 gallons aggregate capacity. Tanks containing over 1000 gallons of a CLASS III A liquid shall be installed in accordance with the requirements for fire-resistant tanks and tanks in vaults specified in NFPA 30A listed in Chapter 45. Such tanks shall also be approved and meet equivalent standards of those tanks which are listed as AProtected@ as defined by UL 2085. Tanks containing 1000 gallons or less of a CLASS III A liquid shall be installed in accordance with the requirements for fire-resistant tanks specified in NFPA 30A listed in Chapter 45. Such tanks shall also be approved, and meet equivalent standards of those tanks which are listed as AFire Resistant@ as defined by UL 2080.
- 11. Class III B Liquids Tanks containing CLASS III B liquids shall not exceed 2,000 gallons individual capacity or 2,000 gallons aggregate capacity. Tanks containing over 1000 gallons of a CLASS III B liquid shall be installed in accordance with the requirements for fire-resistant tanks and tanks in vaults specified in NFPA 30A listed in Chapter 45. Such tanks shall also be approved and meet equivalent standards of those tanks which are listed as AProtected@ as defined by UL 2085. Tanks containing from 100 gallons up to 1000 gallons of a CLASS III B liquid shall be installed in accordance with the requirements for fire-resistant tanks specified in NFPA 30A listed in Chapter 45. Such tanks shall also be approved, and meet equivalent standards of those tanks which are listed as AFire Resistant@ as defined by UL 2080.
- 12. Add: Overfill Prevention: Above-ground storage tanks shall be equipped with overfill prevention equipment that will comply with one of the following.
  - a. Automatically shut off the flow of liquid into the tank when it is no more than ninety percent (90%) full.
  - b. Alert the transfer operator when the tank is no more than ninety percent (90%) full by restricting the flow of liquid into the tank or triggering a high-level alarm.
  - c. Other methods as approved by the Code Official.
- 13. Add: Distances to Buildings, Property Lines, etc.: The minimum distance between above-ground tanks and other tanks, buildings, sewers, catch basins, septic tanks and property lines shall be thirty (30) feet. The minimum distance between tanks located within the same aggregate tank area shall be five (5) feet.
  - Exception Class III B liquids: The minimum distance between above-ground tanks and other tanks, sewers, catch basins, septic tanks and property lines shall be five (5)

- feet. The minimum distance between tanks and buildings and between tanks located within the same aggregate tank area shall be three (3) feet.
- 14. Add: Tank Labeling: All tanks shall be labeled in accordance with F-3203.2.2. In addition, the following shall be displayed on all visible tank sides in 4" or taller letters clearly legible, and in a contrasting color to the tank.
  - Either FLAMMABLE or COMBUSTIBLE (depending on contents flashpoint)
  - NO SMOKING
  - The common name of the contents; i.e. WASTE MOTOR OIL

## Chapter 44 – Add or Update NFPA Reference Standards As Follows:

12A	Halon 1301 Fire Extinguishing System
13	Installation of Sprinkler Systems
13D	Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes
13R	Sprinkler Systems in Residential Occupancies up to and including Four Stories in Height
14	Installation of Standpipe and Hose Systems
15	Water Spray Fixed Systems
16a	Installation of Closed-head Foam-water Sprinkler Systems
30	Flammable Liquids Code
30A	Automotive and Marine Service Stations
32	Dry-cleaning Plants
36	Solvent Extraction Plants
10	Handling of Cellulose Nitrate Film
13d	Storage of Pesticides
45	Fire Protection for Laboratories Using Chemicals
<del>1</del> 6	Storage of Forest Products
19	Hazardous Chemicals Data
50	Bulk Storage of Oxygen
51a	Acetylene Cylinder Charging Plants
53	Fire Hazards in Oxygen-enriched Atmospheres
55	Compressed and Liquefied Gases in Portable Cylinders
57	Liquefied Natural Gas Vehicular Fuel Systems
58	Venting of Deflagration
59	Explosion Prevention Systems
70b	Electrical Equipment Maintenance

70e	Electrical Safety Requirements for Employee Workplaces
72	National Fire Alarm Code
75	Protection of Electronic Computer/Data Processing Equipment
77	Static Electricity
79	Electrical Standard for Industrial Machinery
80a	Exterior Fire Exposures
82	Incinerators, Waste and Linen Handling Systems and Equipment
86	Ovens and Furnaces
86c	Industrial Furnaces using a Special Processing Atmosphere
86d	Industrial Furnaces Using Vacuum as an Atmosphere
88a	Parking Structures
90a	Installation of Air Conditioning and Ventilating Systems
90b	Installation of Warm Air Heating and Air Conditioning Systems
92a	Smoke Control Systems
92b	Smoke Management Systems in Malls, Atria, Large Areas
96	Ventilation Control and Fire Protection of Commercial Cooking Operations
97	Glossary of Terms Relating to Chimneys, Vents and Heat Producing Appliances
99b	Hypobaric Facilities
101a	Alternative Approaches to Life Safety
105	Smoke Control Door Assemblies
110	Emergency and Standby Power Systems
111	Stored Electrical Energy Emergency and Standby Power Systems
115	Laser Fire Protection
150	Fire Safety in Racetrack Stables
160	Flame Effects Before an Audience

170 Fire Safety Symbols 203 Roof Coverings and Roof Deck Constructions 204m Smoke and Heat Venting 211 Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances 214 Water-cooling Towers 220 Types of Building Construction 221 Firewalls and Fire Barrier Walls 231 General Storage 231c Rack Storage of Materials 231d Storage of Rubber Tires 231e Storage of Baled Cotton 231f Storage of Roll Paper 232 Records, Protection of 232a Archives and Records Centers 241 Construction, Alteration and Demolition Operations 251 Fire Tests of Building Construction and Materials 252 Fire Tests of Door Assemblies 253 Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source 255 Test of Surface Burning Characteristics of Building Materials 256 Methods of Fire Tests of Roof Coverings 257 Fire Tests of Window Assemblies 258 Research Test Method for Determining Smoke Generation of Solid Materials 259 Test Method for Potential Heat of Building Materials 260 Cigarette Ignition Resistance of Components of Upholstered Furniture Method of Test for Fire and Smoke Characteristics of Wires and Cables 262

263	Heat and Visible Smoke Release Rates for Materials and Products, Method of Test
264	Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
264a	Method of Test for Heat Release Rates for Upholstered Furniture Components or Composites and Mattresses Using an Oxygen Consumption Calorimeter
265	Evaluating Room Fire Growth Contribution of Textile Wall Coverings
265	Fire Characteristics of Upholstered Furniture Exposed to Flaming Ignition Source, Method of Test
266	Fire Characteristics of Mattresses and Bedding Assemblies Exposed to Flaming Ignition Source, Method of Test
268	Exterior Wall Assemblies, Test for Ignitibility
269	Toxic Potency Data, Test for Developing
291	Fire Flow Testing and Marking of Hydrants
295	Wildfire Control
298	Foam Chemicals for Class A Fuels -Rural, Suburban, Veg. Areas
299	Protection of Life and Property from Wildfire
318	Protection of Cleanrooms
325	Fire Hazard Properties of Flammable Liquids, Gases and Volatile Solids
326	Safe Entry of Underground Storage Tanks
327	Cleaning or Safeguarding Small Tanks and Containers Without Entry
328	Control of Flammable and Combustible Liquids and Gases in Manholes, Sewers and Similar Underground Structures
329	Handling Underground Releases of Flammables and Combustible Liquids
386	Portable Shipping Tanks for Flammable and Combustible Liquids
418	Heliports
430	Liquid and Solid Oxidizers
432	Organic Peroxide Formulations, Storage of
481	Production, Processing, Handling and Storage of Titanium

482	Production, Processing, Handling and Storage of Zirconium
485	Lithium Metal-Storage, Handling, Processing and Use
491	Hazardous Chemical Reactions
495	Explosive Materials Code
496	Purged and Pressurized Enclosures for Electrical Equipment in Hazardous (classified) Locations
497	Classification of Flammable Liquids, Gases or Vapors and of Hazardous (classified) Locations for Electrical Installations in Chemical Process Areas
498	Safe Havens for Vehicles Transporting Explosives
499	Classification of Combustible Dusts and of Hazardous (classified) Locations for Electrical Installations in Chemical Process Areas
501	Manufactured Housing
501a	Fire Safety Criteria for Manufactured Home Installations, Sites and Communities
505	Powered Industrial Trucks Including Type Designations, Areas of Use, Maintenance and Operations
513	Motor Freight Terminals
550	Fire Safety Concepts Tree
555	Evaluating Potential for Room Flashover
560	Ethylene Oxide for Sterilization and Fumigation, Storage, Handling and Use of
600	Industrial Fire Brigades
601	Guard Service in Fire Loss Prevention
650	Pneumatic Conveying Systems for Handling Combustible Particulate Solids
651	Manufacture of Aluminum Powder
654	Prevention of Fire and Dust Explosions from Manufacturing Combustible Particulate Solids
703	Fire Retardant Impregnated Wood and Fire Retardant Coatings for Building Materials
704	Identifications of Hazards of Materials
705	Field Flame Test for Textiles and Films

720	Household Carbon Monoxide Warning Equipment
750	Water Mist Fire Protection Systems
780	Installation of Lightning Protection Systems
801	Facilities Handling Radioactive Materials
820	Fire Protection in Wastewater Treatment and Collection Facilities
909	Protection of Cultural Resources
914	Fire Protection in Historic Structures
1122	Code for Model Rocketry
1125	Model Rocket and High Power Rocket Motors
1126	Use of Pyrotechnics Before a Proximate Audience
1127	High Power Rocketry
1231	Water Supplies for Suburban and Rural Fire Fighting
2001	Clean Agent Fire Extinguishing Systems
8501	Single Burner Boiler Operation
8502	Prevention of Furnace Explosions/Implosions in Multiple Burner Boilers
8503	Pulverized Fuel Systems
8504	Atmospheric Fluidized-bed Boiler Operation
8505	Stoker Operation
8506	Heat Recovery Steam Generator Systems